WHAT IS CLAIMED IS:

1. A process for anaerobic fermentation in a liquid medium wherein the concentration of gas generated by the fermenting liquid is controlled for at least part of the process by removing dissolved gas directly from the fermenting liquid by diffusion.

2. The process according to Claim 1, wherein said concentration of dissolved gas is below the saturation level.

3. The process according to Claim 1, wherein the dissolved gas is removed from the fermenting liquid by diffusion across a gas permeable membrane.

4. The process according to Claim 3, wherein the dissolved gas is removed from the fermenting liquid by using a flow of nitrogen gas on the opposite side of the membrane to the fermenting liquid.

5. The process according to Claim 3, wherein the dissolved gas is removed from the fermenting liquid by applying a pressure differential using a vacuum on the opposite side of the membrane to the fermenting liquid or pressurising the liquid contact side of the membrane.

6. The process according to Claim 1, wherein the gas removed by said diffusion is used in downstream processing of a fermentation product.

7. The process according to Claim 1, wherein the gas is methane.

8. The process according to Claim 1, wherein the gas is carbon dioxide.

9. The process according to Claim 8, wherein the fermentation is the brewing of beer.

10. The process according to Claim 1, wherein during startup of the fermentation process a molecular oxygen-containing gas is introduced into the fermenting liquid by diffusion.

11. A process for the brewing of beer using anaerobic fermentation of a broth wherein the concentration of carbon dioxide generated by the fermenting broth is controlled for at least part of the process by removing dissolved carbon dioxide directly from the fermenting broth by diffusion across a gas permeable membrane.

12. A process for reducing the level of foam generated during anaerobic fermentation in a liquid medium comprising controlling the concentration of generated gas in the fermenting liquid by removing dissolved gas therefrom by diffusion during at least part of the fermentation.

13. The process according to Claim 12, wherein said concentration of dissolved gas is below the saturation level.

14. The process according to Claim 12, wherein the dissolved gas is removed from the fermenting liquid by diffusion across a gas permeable membrane.

15. The process according to Claim 14, wherein the dissolved gas is removed from the fermenting liquid by using a flow of nitrogen gas on the opposite side of the membrane to the fermenting liquid.

16. The process according to Claim 14, wherein the dissolved gas is removed from the fermenting liquid by applying a pressure differential using a vacuum on the opposite side of the membrane to the fermenting liquid or pressurising the liquid contact side of the membrane.

17. The process according to Claim 12, wherein the gas removed by said diffusion is used in downstream processing of a fermentation product.

18. The process according to Claim 12, wherein the gas is methane.

19. The process according to Claim 12, wherein the gas is carbon dioxide

20. The process according to Claim 19, wherein the fermentation is the brewing of beer.

21. The process according to Claim 12, wherein during startup of the fermentation process a molecular oxygen-containing gas is introduced into the fermenting liquid by diffusion.

22. A process for reducing the level of foam generated during the brewing of beer using anaerobic fermentation of a broth comprising controlling the concentration of generated carbon dioxide in the fermenting broth by removing dissolved carbon dioxide therefrom by diffusion across a gas permeable membrane during at least part of the fermentation.

23. Use of a gas permeable membrane in an anaerobic fermentation process to remove dissolved gas generated in a fermenting liquid to reduce the level of foam generated by controlling the concentration of gas in the liquid.

24. The use according to Claim 23, wherein said concentration of dissolved gas is below the saturation level.

25. The use according to Claim 23, wherein the dissolved gas is removed from the fermenting liquid by applying a pressure differential using a vacuum on the opposite side of the membrane to the fermenting liquid or pressurising the liquid contact side of the membrane.

26. The use according to Claim 23, wherein the gas is methane.

27. The use according to Claim 23, wherein the gas is carbon dioxide.

28. The use according to Claim 27, wherein the fermentation is the brewing of beer.

29. An apparatus for carrying out a process as defined in Claims 1, 11, 12 or 22, said apparatus comprising a fermentation vessel for anaerobic fermentation in a liquid medium, a separator unit comprising at least one gas permeable membrane for the diffusion of gas from dissolution in the fermenting liquid, means for contacting the fermenting liquid with one side of the membrane; and means for removing gas diffusing through the membrane to the other side thereof.

30. The apparatus according to Claim 29, wherein the separator unit is located in the fermentation vessel.

31. The apparatus according to Claim 29 comprising means to apply a vacuum to said other side of the gas permeable membrane.